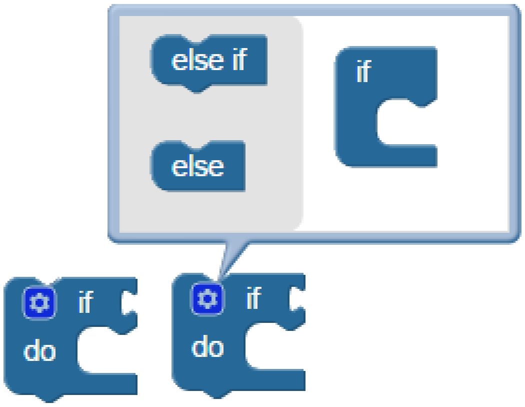
A loop is an instruction or a group of instructions which are executed more than once. Looping and conditional statements are extraordinarily useful tools.

The following information is from

http://learn.parallax.com/support/reference/propeller-blocklyprop-block-reference/control

if...do



The **if...do** block is for decision-making: *if* the condition inserted at right is true, the enclosed code in the *do* section will execute. If the condition is not true, the do section will be skipped over and not executed.

The **if...do** block is a mutating block, indicated by the gear that can be clicked. It allows the block to include multiple “else” and “else if” conditions. If the first condition is not true, its enclosed code will be skipped and the next **else if** or **else** conditions will be evaluated and executed if true, before exiting the outer block.

Read about if...then...elseif vs switch...case, and when to use one or the other, in this short "Did you Know?" article.

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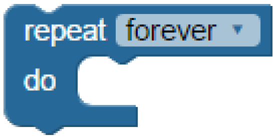
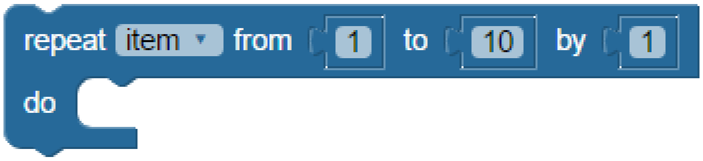
conditional repeat



The **conditional repeat** block creates a loop that, depending on the option chosen in the menu, repeats forever, __ x times, until __, or while __. With the exception of forever, each of the other options require a condition to be added that indicates when the loop should end.

- repeat forever: loops forever. Only a **break** block will escape the loop and move on to the rest of the program.
- repeat __x times: put a block in here to provide the number of times you want the loop to repeat before moving on. Block options are anything that resolve to a number, such as number value, math operation, random, or use variable.
- repeat until__: put a block in here with a condition to test. Code inside the conditional repeat will run until that condition is true (any number other than 0).
- repeat while__: put a block in here with a condition to test. Code inside the conditional repeat will run while that condition is true (any number other than 0).

repeat item



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repeat item ▾ from 1 to 10 by 1
do
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The **repeat item** block creates a loop that repeats a certain number of times, starting with the *from*__ value and ending with the *end*__ value. To take larger steps between the start and end values, increase the *by*__ value.

Caution: If you are using a variable you already created for the repeat item, this block will reset it to be equal to the *from*__ value and it will keep changing the value of the variable each time it loops.